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24972 7590 11/20/2009 FULBRIGHT & JAWORSKI, LLP 666 FIFTH AVE NEW YORK, NY 10103-3198			EXAMINER VIJAYAKUMAR, KALLAMBELLA M	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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DETAILED ACTION

- Applicant's amendment filed with the arguments on 04/06/2009 has been entered.
- Claims 31, 33-36, 39-49, 51-69 and 71-80 as amended are currently pending with the application. Claims 31, 47, 63-66 and 68-69 were amended. Claims 1-30, 32, 37-38, 50 and 70 were cancelled.
- Applicant's amendment overcomes the Claim Objections and Rejections under 35 USC 112-II Para cited in the last office action.

Claim Rejections - 35 USC § 103

- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 31, 33-35, 39-49, 51-69, 74, 78 and 80 are rejected under 35 U.S.C. 103(a) as obvious over either Wiechelhaus et al (WO 99/24545) or Wiechelhaus et al (US 6,479,103).

The US patent 6,479,103 issued to Wiechelhaus et al is being used as the English Translation of the WO Document.

Wiechelhaus et al teach the composition of a corrosion resistant coating composition and a coating over a substrate comprising:

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a). 40 to 70 wt.% of powdered extenders selected from zinc, aluminum, carbon black <component C>, graphite and/or molybdenum disulfide <component-B>, iron phosphide <component-A>, SnO/Sb₂O₃ doped-BaSO₄ <component-B/A>,

b). The specific examples in Table-1 teach the addition of a mixture of extenders/pigments/conductive agents, phthalocyanine <corrosion inhibitor which is not in particle form> and modified castor oil <additive> <Tbl-1>. The prior art further teaches an example containing Zn, MoS₂, doped silica and phthalocyanine <Tbl-3, Comparative>.

c). 0 to 15 wt% of a silicate-based anti-corrosive pigment <component-D>,

d). 10 to 40 wt. % of an organic binder. The organic binder consists of at least one epoxy, at least one curing agent selected from guanidine, substituted guanidines, substituted ureas, cyclic tertiary amines and mixtures thereof, together with at least one blocked polyurethane resin <post cross-linking agent>. The amine curing agents further meet the limitation of corrosion inhibitor that is not in particulate form (Abstract; Cl-3, Ln 1-29; Cl-5, Ln 49-64; Tables 1-3; Cl-6, Ln 34).

e). 0 to 30 wt% of a solvent,

f). The steel sheet metal was cleaned, optionally chromated <precoated> and then coated with 2-5 micron coating, whereby the particles present in the coating are necessarily less than 2 micron in diameter for a monolayer film over a surface with a 2-micron thickness, that meets the limitation of particle sizes in the claims.

- The prior art fails to teach a composition containing the pigments/extender ratios in terms of $\Sigma(B+C)/\Sigma(A+B+C)$ and $\Sigma(A+B+C)/\Sigma(A+B+C+D)$ per claims -31, 74 and 80.

However, the prior art teaches the addition of a blend of conductive pigments and addition of even miniscule amount of iron phosphide in examples 1 and 3, or MoS₂ in examples 9 and 10 <Tbl-1> from a small list of preferred conductive pigments would result in pigment ratios close to the instant claimed ranges. Further, it would have been obvious to a person of ordinary skill in the art to add these pigments over prior art disclosure, because they are corrosion protection pigments and the composition has the same common utility with instant claimed composition as corrosion-resistant conductive coatings for metals (Spec, US 2006/0058423; P-0001) in obviously arriving at instant composition.

For example, the Sample- 9 contains 25 pbw Zn (C), 20 pbw FeP (A) <binary conductive mixture> and 5 pbw doped silica (D); and an addition of as low as 0.1 pbw of MoS₂ in Ex-9 will result in

$$\Sigma(B+C) / \Sigma(A+B+C) = (0.1+35) / (0.1+35+20) = 63.75 \text{ wt\% and}$$

$$\Sigma(A+B+C) / \Sigma(A+B+C+D) = (0.1+35+20) / (0.1+35+20+5) = 91.7\%; \text{ and } A=33.3 \text{ wt\%}.$$

And these values would lie inside the instant claimed ranges.

Therefore adding of a miniscule amount of MoS₂ would result in ratios for components that either lie inside, or lie close to instant claimed ranges, and prima facie obviousness exists. <MPEP 2144.05 [R-5]-I>.

The component pigment ratios further meet the ratio limitation in claims 46-47 and 52; and composition/coating in claim 69; and composition in claim-74 and 80.

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With regard to claims 33-35, 39-45 and 48-49, the prior art teaches a coating of with 2-5 micron coating, whereby the particles present in the coating are necessarily less than 2-5 micron in diameter for a monolayer film over a surface with a 2-5 micron thick, and the instant claimed particle sizes would be obvious. With regard to claim-45, the particle size of the particles vary from sub-micron to the thickness of the film (for a monomolecular film) and the particle size ratio between particles A and C would overlap with the instant claimed ratio of 0.1-4 (for equi-sized particles, the ratio would be 1.0) and In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. <MPEP 2144.05 [R-5]-I>.

With regard to claim 51, the prior art teaches adding carbon black.

With regard to claim 53, the prior art teaches adding graphite and molybdenum disulfide.

With regard to claims 54-55, the range of not more than 0.5 wt% in claim-54 includes $0 \leq x \leq 0.5$ and the range of not more than 0.5 wt% in claim-55 includes $0 \leq x \leq 0.5$; makes the component optional and Claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure [MPEP 2111.04 [R-3]].

With regard to claim 56, the prior art does not add wax or wax-like substance.

With regard to process claims 57-69 and 78, the prior art further teaches making the coating composition by mixing the components till homogeneous (Cl-6, Ln 25-33). The composition was applied over a steel sheet metal that was cleaned, optionally chromated <precoated> and then coated with 2-5 micron coating, and drying the coating at a peak metal temperature of 180-235C (Cl-6, Ln 9-17). With regard to the process steps in claims 60-63, the examiner asserts that the prior art coating will be either same or substantially same as that produced by the claimed process steps.

2. Claims 31, 33-35, 39-49, 52-69, 74, 78 and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soltwedel (US 6,008,462).

Soltwedel teaches a mar resistant corrosion inhibiting weldable coating for metals and a coating composition comprising:

- a). inorganic fillers such as oxides <component-A> in an amount of not greater than 25 wt%, and preferably ~10-20 wt% (Cl-10, Ln 60-Cl-11, Ln 13); <Titania, TiPure_R900; Tbl-1>;
- b). an internal lubricant such as MoS₂ <component-B> wherein the lubricant had a particle size of 0.01-30 micron and present in an amount of 0.2-1.5 wt% total solids (Cl-7, Ln 40-49);
- c). conductive metallic particles such as Fe <component-C> with a particle size passing through -325 mesh (< 45 micron) in an amount of up to 50 wt% and preferably 30-40 wt% (Cl-9, Ln 34-60);
- d). corrosion inhibitors such as strontium chromate <component-D> in an amount between ~3 and 10 wt% and with a particle size of 2-6 micron (Cl-11, Ln 34- 47); suspension agent such as magnesium aluminum silicate in an amount of 0.3-2 wt% <component-D> (Cl-10, Ln 15-15);

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5). organic binders such epoxy (Cl-4, Ln 22-41; Cl-6, Ln 46-66), crosslinker, solvent, catalysts such as tertiary amines <corrosion inhibitor which is **not** in particulate form> (Cl-8, Ln 33), (Abstract, Cl-4, Ln 22-41; Cl-7, Ln 11-17; Cl-8, Ln 25-30; Cl-9, Ln 35-59; Cl-10, Ln 38-40, Ln 60-67; Cl 37-13-14, Table-1).

The weldable coating was about 0.4-0.6 mil (~10~15 micron) and a particle size of less than 10 micron for the oxides (**component-A**) would be obvious (Cl-13, Ln 9-15).

The ratio of components at the maximum of the preferred ranges would be:

$$(B+C)/(A+B+C) = (40+1.5)/(40+1.5+20) = 67.5 \text{ wt\%}; \text{ and}$$

$$(A+B+C)/(A+B+C+D) = (40+1.5+20)/(40+1.5+20+10+2) = 83.7 \text{ wt\%};$$

$$A = 27.2\%, B = 2.0\%; C = 54.4\%; D = 16.3\%.$$

Corresponding values at the low end would be $(B+C)/(A+B+C) = 75.1\%$; $(A+B+C)/(A+B+C+D) = 92.4\%$; $A = 23\%$, $B = 0.05\%$; $C = 69\%$; $D = 7.6\%$.

- The prior art is silent about the exact particle size distribution of the component-A or the component ratio/ranges per the claims 31, 74 and 80.

However, the prior art teaches a coated film with a thickness of ~10-15 micron whereby the presence of particles less than 10 micron size would be obvious. The prior art pigments ratio $\Sigma(B+C)/\Sigma(A+B+C)$ of 67.5-71.5% and pigments ratio $\Sigma(A+B+C)/\Sigma(A+B+C+D)$ of 83.7-91.4% lies inside the corresponding ranges in claims 31, 74 and 80, and In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. MPEP 2144.01. This would further meet the ratio of pigments in claim-46-47; and the composition/coating in claims 69, 74 and 80.

With regard to claims 33-35, 39-41, 43-44 and 48-49, the prior art teaches component particle sizes that overlap with the instant claimed ranges, and in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. <MPEP 2144.05 [R-5]-I>.

With regard to claims -42 and 45, the particle size of the respective prior art components overlap with the instant claimed components and the particle size ratios of the components when calculated as their ratios would obviously overlap with the instant claimed ranges for particle sizes and In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. <MPEP 2144.05 [R-5]-I>.

With regard to claim 52, the prior art teaches adding 100% as oxides <component-A>

With regard to claim 53, the prior art teaches adding molybdenum disulfide.

With regard to claims 54-56, the range of not more than 0.5 wt% in claim-54 includes $0 \leq x \leq 0.5$ and the range of not more than 0.5 wt% in claim-55 includes $0 \leq x \leq 0.5$; makes the component optional and Claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure [MPEP 2111.04 [R-3]]. With regard to claim-56, the prior art does not add any waxy material (See Ex-1; Cl 13-14).

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With regard to process claims 57-68 and 78, and coating in claim-69, the prior art further teaches making the coating composition by mixing the components till homogeneous (Cl-12, Ln 36-42). The composition was applied over a steel sheet metal <direct coating> or galvanized steel <precoated> and then coated with 2-5 micron coating, and drying the coating at a peak metal temperature of 180-235C (Cl-12, Ln 44 – Cl-13, Ln 15). With regard to the process steps in claims 60-63, the examiner asserts that the prior art coating will be either same or substantially same as that produced by the claimed process steps.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 31, 33-35, 40, 46-47, 56, 69, 74, 78 and 80 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 141-150, 153-154, 156-171 and 173-177 of copending Application No. 10/511,223 as amended on 10/09/2009. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant application and copending application are drawn to similar compositions having similar components and same utility as conductive coatings, while copending claims contain specific ranges of components and differ from the instant claims that are silent about these ranges, and it would be obvious to a person of ordinary skill in the art to optimize the composition for coating applications because they are well known in the art (See Wiechelhaus et al (WO 99/24545). The limitation of comprising in copending claims does not exclude the components present in the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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Allowable Subject Matter

- Claims 36, 71-73, 75-77 and 79 are allowed.

The prior art of record neither teaches nor fairly suggestive of a composition containing the pigments in Applicants the ratio of $\Sigma(A+B+C)/\Sigma(A+B+C+D)$ of 30 wt%, wherein the pigment-D is present in the amount of 70 wt%.

Response to Arguments

Applicants arguments filed 10/09/2009 have been fully considered and they are not persuasive because:

a). In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning in case of *Wiechelhaus* (Res, Pg-11, Para-Last), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to the argument that why one would add FeP/MoS₂ in to compositions in examples 1, 3, 9 and 10 (Tbl-1), one of ordinary skilled in the art would be motivated to add FeP or MoS₂ selected from a very small group of preferred conductive pigments taught by *Wichaeueus* as a third component to the examples in 1, 3 and 9-10 respectively with reasonable expectation of success because the prior art clearly teaches adding mixtures of conductive components including a ternary conductive mixture in example-5, in Table-1, and the prior art is not limited to specific teachings and “[I]n considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” MPEP 2144.01.

Applicant's argument that *Wichaeueus* and *Soltwedel* do not teach the claimed particle size of Component-A, based on d₉₉ measured by *Mastecizer* of type S by *Malvern Instruments* is less than 10 micron; and the mesh size designates particles larger than a size is not present is noted, and not persuasive (Res, Pg-12, I-Para and V-Para): When a particle size is expressed in terms of sieve size (Ex: -325 mesh/ sieve), it contains particles less than the specific sieve size i.e. passing through the sieve, which will overlap with the instant claimed particle size of 10 micron for component-A, and further any of the larger particles passing through the sieve or other additives are not precluded by the limitation of “comprising”. Furthermore, *Wichaeueus* does not teach the particle size in terms of sieve/mesh size. *Soltwedel* does it so only for Iron particles.

However, the bottom line is that the *Wichaeueus* teaches a film thickness of 1-10 micron, preferably 2-5 micron (Cl-3, Ln 24-26) which must contain particles of size less than 10 microns, whether the prior art is silent about the particle size, or whether it is controlled by sieves or measured by any other method including SEM, and

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applicants have not shown it can not be so, by any means. Similarly Soltwedel teaches a film thickness of 10-15 micron and at least a film of 10 micron thick must contain particles of size less than 10 microns. Furthermore, Tipture, R-900 taught by Soltwedel <Component-A> (Cl-13, Ex-1, Tbl-1, L-53) has a median particle size of 0.41 micron.

For the reasons set forth above applicants fail to patentably distinguish their composition over prior art.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KALLAMBELLA VIJAYAKUMAR whose telephone number is (571)272-1324. The examiner can normally be reached on M-F 07-3.30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KMV/

November 17, 2009.

/Stanley Silverman/

Supervisory Patent Examiner, Art Unit 1793